EPITAXIAL GROWTH FOR WAVEGUIDE TAPERING

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] The present invention is related to commonly-assigned and co-filed U.S. 10/160625, filed 05/31/2002, JDS 12/27/04 Patent Application No. [Attorney Docket No. 42P13840] entitled "Method For Producing Vertical Tapers In Optical Waveguides By Over Polishing" by M. Salib, 10/159379, filed 05/31/2002, JDS 12/27/04 and to U.S. Patent Application No. [Attorney Docket No. 42P13842] entitled "Fabrication Of A Waveguide Taper Through Ion Implantation" by M. Salib *et al.*

FIELD OF THE INVENTION

[0002] The field of invention relates to optical communication devices in general; and, more specifically but not limited to waveguide tapers in optical devices.

BACKGROUND

[0003] Some optical devices may include a waveguide that is intended to be coupled to another waveguide or fiber having a significantly larger cross-sectional size. For example, a planar lightwave circuit (PLC) can have a waveguide on the order of four microns in width to be coupled an optical fiber with a diameter of about ten microns. One way to couple a port of a relatively large waveguide to a port of a significantly smaller waveguide is by forming a tapered waveguide structure to couple the two waveguides. In one type of taper, the taper at one end has a width or diameter of about the same size as the larger waveguide. At the other end, the